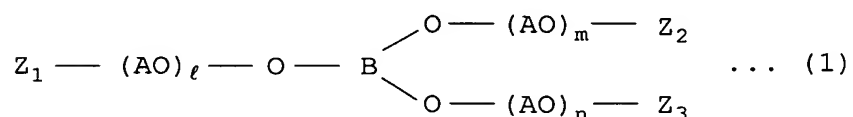


Amendments to the Claims

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

Listing of Claims

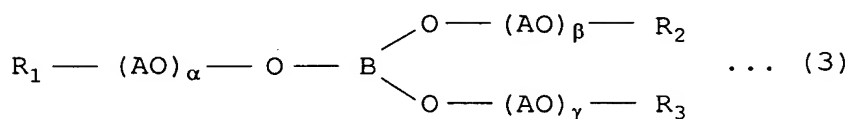
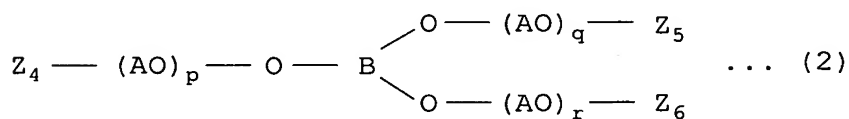
1. (Original) A lithium secondary battery having a positive electrode and a negative electrode which reversibly intercalate and deintercalate lithium and an electrolyte containing an ion conductive material and an electrolytic salt, where said ion conductive material contains a boron-containing compound represented by the following formula (1):



wherein B represents a boron atom; Z_1 , Z_2 and Z_3 each represent an organic group having an acryloyl group or a methacryloyl group or a hydrocarbon group of 1-10 carbon atoms, with the proviso that one or two of Z_1 , Z_2 and Z_3 are the organic groups having an acryloyl group or a methacryloyl group; AO represents an oxyalkylene group of 1-6 carbon atoms and comprises one or two or more of the oxyalkylene groups; and ℓ , m and n each represent an average degree of polymerization of the oxyalkylene group and is more than 0 and less than 4, provided that $\ell+m+n$ is 1 or more.

2. (Original) A lithium secondary battery according to claim 1, wherein the electrolyte contains a polymer obtained by polymerizing the boron-containing compound represented by the formula (1).

3. (Currently amended) A lithium secondary battery having a positive electrode and a negative electrode which reversibly intercalate and deintercalate lithium and an electrolyte containing an ion conductive material and an electrolytic salt, where the ion conductive material comprises a polymerizable composition which contains a boron-containing compound represented by the following formula (2) and a boron-containing compound represented by the following formula (3) ~~and which has a molar ratio of the compound of the formula (2) and the compound of the formula (3) [(molar number of the compound of the formula (3))/ (molar number of the compound of the formula (2))] of 0.1-9:~~



wherein B represents a boron atom; Z_4 , Z_5 and Z_6 each represent an organic group having an acryloyl group or a methacryloyl group or a hydrocarbon group of 1-10 carbon atoms, with the proviso that at least one of Z_4 , Z_5 and Z_6 is said organic group having an acryloyl group or a methacryloyl group; R_1 , R_2 and R_3 each represent a hydrocarbon group of 1-10 carbon atoms; AO represents an oxyalkylene group of 1-6 carbon atoms and comprises one or two or more of the oxyalkylene groups; and p, q, r, α , β and γ each represent an average degree of polymerization of the oxyalkylene group and is more than 0 and less than 4, provided that each of the sum $p+q+r$ and the sum $\alpha+\beta+\gamma$ is 1 or more.

4. (Currently amended) A lithium secondary battery according to claim 3,

wherein the molar ratio of the compound of the formula (2) and the compound of the formula (3) [(molar number of the compound of the formula (3))/(molar number of the compound of the formula (2))] ~~of 0.1-4~~ is 0.1 to 9.

5. (Original) A lithium secondary battery according to claim 3, wherein the electrolyte contains a polymer obtained by polymerizing the polymerizable composition.

6. (Original) A lithium secondary battery according to claim 4, wherein the electrolyte contains a polymer obtained by polymerizing the polymerizable composition.

7. (Original) A lithium secondary battery according to claim 1, wherein the electrolytic salt is at least one of LiPF_6 , $\text{LiN}(\text{CF}_3\text{SO}_2)_2$, LiClO_4 , LiBF_4 , LiAsF_6 , LiI , LiBr , LiSCN , $\text{Li}_2\text{B}_{10}\text{Cl}_{10}$ and LiCF_3CO_2 .

8. (Original) A lithium secondary battery according to claim 2, wherein the electrolytic salt is at least one of LiPF_6 , $\text{LiN}(\text{CF}_3\text{SO}_2)_2$, LiClO_4 , LiBF_4 , LiAsF_6 , LiI , LiBr , LiSCN , $\text{Li}_2\text{B}_{10}\text{Cl}_{10}$ and LiCF_3CO_2 .

9. (Original) A lithium secondary battery according to claim 3, wherein the electrolytic salt is at least one of LiPF_6 , $\text{LiN}(\text{CF}_3\text{SO}_2)_2$, LiClO_4 , LiBF_4 , LiAsF_6 , LiI , LiBr , LiSCN , $\text{Li}_2\text{B}_{10}\text{Cl}_{10}$ and LiCF_3CO_2 .

10. (Original) A lithium secondary battery according to claim 4, wherein the electrolytic salt is at least one of LiPF_6 , $\text{LiN}(\text{CF}_3\text{SO}_2)_2$, LiClO_4 , LiBF_4 , LiAsF_6 , LiI , LiBr , LiSCN , $\text{Li}_2\text{B}_{10}\text{Cl}_{10}$ and LiCF_3CO_2 .

11. (New) A lithium secondary battery according to claim 1, wherein the boron-containing compound represented by the formula (1) has a molecular weight of 300-1000.
12. (New) A lithium secondary battery according to claim 1, wherein the number of carbon atoms in A0 is 1-4.
13. (New) A lithium secondary battery according to claim 1, wherein each of ℓ , m and n is 1-3, and $\ell + m + n$ is 3-9.
14. (New) A lithium secondary battery according to claim 1, wherein the boron-containing compound represented by the formula (1) has a molecular weight of 500-800.
15. (New) A lithium secondary battery according to claim 3, wherein each of the compounds represented by the formula (2) and by the formula (3) has a molecular weight of 300-1000.
16. (New) A lithium secondary battery according to claim 3, wherein each of the compounds represented by the formula (2) and by the formula (3) has a molecular weight of 500-800.
17. (New) A lithium secondary battery according to claim 3, wherein the number of carbon atoms in A0 is 1-4.

18. (New) A lithium secondary battery according to claim 3, wherein all of Z_4 , Z_5 and Z_6 are organic groups having an acryloyl group or a methacryloyl group.

19. (New) A lithium secondary battery according to claim 3, wherein p, q, r, α , β and γ are 1-3; and $p+q+r$ and $\alpha+\beta+\gamma$ are 3-9.

20. (New) A lithium secondary battery according to claim 4, wherein said molar ratio is 0.5 to 4.

21. (New) A lithium secondary battery according to claim 20, wherein said molar ratio is 1-2.5.